

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Scanzano et al.

Confirmation No.: 9756

Serial No.: 09/942,787

Group Art Unit: 2161

Filed: August 29, 2001

Examiner: Te Y. Chen

For: DATABASE SYSTEMS, METHODS AND COMPUTER PROGRAM PRODUCTS
USING TYPE BASED SELECTIVE FOREIGN KEY ASSOCIATION TO REPRESENT
MULTIPLE BUT EXCLUSIVE RELATIONSHIPS IN RELATIONAL DATABASES

Date: April 26, 2007

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CERTIFICATION OF TRANSMISSION

I hereby certify that this correspondence is being transmitted via the Office electronic filing system in accordance with § 1.6(a)(4) to the U.S. Patent and Trademark Office on April 26, 2007

Signature: _____
Amelia Tauchen

APPELLANTS' REPLY BRIEF ON APPEAL UNDER 37 C.F.R. §41.41

Sir:

This Reply Brief is filed in response to the Examiner's Answer mailed February 26, 2007.

It is not believed that an extension of time and/or additional fee(s) are required, beyond those that may otherwise be provided for in documents accompanying this paper. In the event, however, that an extension of time is necessary to allow consideration of this paper, such an extension is hereby petitioned for under 37 C.F.R. §1.136(a). Any additional fees believed to be due in connection with this paper may be charged to Deposit Account No. 50-0220.

I. The Examiner's Answer – Response to Argument

Appellants will refrain herein from readdressing all of the deficiencies with the pending rejections and, therefore, in the interest of brevity, Appellants hereby incorporate herein the arguments set out in Appellants' Brief on Appeal as if set forth in their entirety. Accordingly, Appellants will only address new arguments made in the Examiner's Answer.

In the "Response to Argument" section beginning on page 5, the Examiner's Answer attempts to rebut Appellants' arguments set forth in Sections II A, B, C, D, and E of Appellants'

Brief on Appeal. Appellants will respond to the arguments in the Examiner's Answer for each of these sections below.

A. Section II A

The Examiner's Answer cites the discussion of FIG. 2 of Jorgensen as disclosing "selectively associating a foreign key value of a record in the relating table with a specific one of the plurality of related tables based on at least one attribute of the record containing the foreign key in the relating table so as to provide multiple but exclusive relationships between tables in the relational database." (Examiner's answer pages 6 - 8). The Examiner's Answer cites the description of the "Keys And Constraints" column 210 in which a foreign key icon can be clicked to display the relationship of table 202 with other hyperlinked tables as disclosing the "selectively associating a foreign key value" recitation reproduced above. (Examiner's Answer, page 8; Jorgensen, col. 3, lines 49 - 64). Appellants again submit that Jorgensen's disclosure related to displaying relationships in an existing database cannot be interpreted as disclosing the recitations of the pending independent Claims 1, 12, and 24 as Jorgensen does not disclose how the relationships are established. Appellants submit that Jorgensen's disclosure describes displaying a conventional foreign key relationship where the foreign key points to a parent table as described in the background of the present application. This is discussed, for example, on pages 8 and 9 of Appellants' Brief on Appeal. Appellants cannot find any disclosure in Jorgensen regarding associating a foreign key value of a record in a relating table with one of a plurality of related tables based on one or more attributes of the record containing the foreign key. It appears that Jorgensen does not discuss how a parent/child table relationship is established through a foreign key because Jorgensen is only interested in displaying the relationship, not the particular way it is established. Thus, Jorgensen does not disclose or suggest associating the foreign key value based on one or more attributes of the record containing the foreign key.

The Examiner's Answer characterizes the aforementioned argument as "spurious" on page 8 of the Examiner's Answer and asserts that the argument that Jorgensen does not indicate that the parent/child table relationship is established by a foreign key and an attribute of the record containing the foreign key is not recited in the rejected claims. (Examiner's Answer, page

8). Appellants respectfully disagree as Claim 1 recites "selectively associating a foreign key associated with a record in a relating table with a specific one of a plurality of related tables **based on at least one attribute of the record in the relating table** by selectively creating a corresponding association in the relational database so as to provide multiple but exclusive relationships between tables in the relational database." (Emphasis added). Claims 12 and 24 include similar recitations. Thus, the independent claims make clear that merely knowing the foreign key does not identify the related tables because the attribute must also be known to identify the specific one of the related tables that is associated with the foreign key. The Examiner's Answer fails to identify any element in Jorgensen that corresponds to the "attribute" recited in Claims 1, 12, and 24.

With respect to Appellants' argument that Jorgensen does not discuss using a foreign key and an attribute to provide a multiple but exclusive relationship, the Examiner's Answer again characterizes the argument as "spurious" and states that the argument is not supported by the rejected claims. (Examiner's Answer, page 9). Appellants respectfully disagree as Claim 1 recites "selectively **associating a foreign key associated with a record in a relating table** with a specific one of a plurality of related tables **based on at least one attribute of the record in the relating table** by selectively creating a corresponding association in the relational database **so as to provide multiple but exclusive relationships between tables in the relational database.**" (Emphasis added). Claims 12 and 24 include similar recitations. The Examiner's Answer cites the discussion of FIGS. 2 and 3A- 3C of Jorgensen as disclosing the multiple, but exclusive relationships recited in independent Claims 1, 12, and 24. (Examiner's Answer, page 10). A multiple, but exclusive relationship is defined in the Specification as "one where entries in a given table may have a one-to-many or a many-to-many relationship to entries in exactly one of several other tables." Similar to the discussion of FIGS. 2A and 2B in the background of the present application, FIGS. 2 and 3A - 3C of Jorgensen merely describe conventional multiple relationships without disclosing any aspect of the one-to-many or many-to many relationship as is recited in Claims 1, 12, and 24.

Thus, Appellants submit that the cited reference fails to disclose or suggest the recitations of independent Claims 1, 12, and 24 for the reasons discussed herein and in Appellants'

previously submitted Brief on Appeal. Accordingly, Appellants respectfully request reversal of the rejections of Claims 1, 12, and 24 for at least these additional reasons.

B. Section II B

With respect to Section II B, the Examiner's Answer cites the "data type" 228 shown in FIG. 2 of Jorgensen as corresponding to the "type attribute" recited in independent Claims 36, 30, and 45. (Examiner's Answer, page 12). Jorgensen merely describes the "data type" column of FIG. 2 as "indicating the data type for each entity in the relational database represented by the entity relationship diagram." (Jorgensen, col. 4, lines 7 - 9). Thus, Jorgensen does not describe the "data type" column 228 of FIG. 2 as identifying which ones of a plurality of second tables a record is associated with as recited in independent Claims 36, 40, and 45. With respect to enforcing the multiple but exclusive relationship between records in the second tables and the first table based on the type attribute, Appellants refer to the discussion above with respect to Section II A and Appellants' Brief on Appeal.

Thus, Appellants submit that the cited reference fails to disclose or suggest the recitations of independent Claims 36, 40, and 45 for the reasons discussed herein and in Appellants' previously submitted Brief on Appeal. Accordingly, Appellants respectfully request reversal of the rejections of Claims 36, 40, and 45 for at least these additional reasons.

C. Section II C and Section II D

With respect to Section II C and II D, Appellants refer to the arguments set forth in Appellants' Brief on Appeal.

D. Section II E

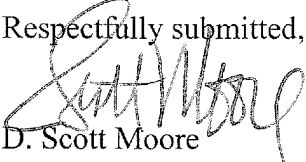
With respect to Section II E, the Examiner's Answer alleges that Appellants have not clearly pointed out the patentable novelty of Claims 17 and 29 and are merely claiming new properties of what is inherently present in the prior art. (Examiner's Answer, page 14). Appellants respectfully disagree as Appellants clearly stated on page 13 of Appellants' Brief on Appeal that "Appellants are **not** claiming new properties of SQL but are claiming the use of database techniques to provide new functionality." (Emphasis added) For example, as explained

on page 13 of Appellants' Brief on Appeal, Jorgensen does not disclose or suggest, at least, a third table that relates records in a first entity table to records in a corresponding one of a plurality of second tables.

Thus, Appellants submit that the cited reference fails to disclose or suggest the recitations of independent Claims 17 and 29 for the reasons discussed herein and in Appellants' previously submitted Brief on Appeal. Accordingly, Appellants respectfully request reversal of the rejections of Claims 17 and 29 for at least these additional reasons.

II. Conclusion

For at least the reasons set forth in above and in Appellants' Brief on Appeal, Appellants request reversal of the rejections of the pending claims, allowance of the pending claims, and passing of the application to issue.

Respectfully submitted,

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